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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/286,119 04/02/99 GOFFI

I ITALO-ET-AL-

IM62/0509

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EXAMINER

LORENZO, J

ART UNIT

PAPER NUMBER

1734

DATE MAILED:

05/09/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action SummaryApplication No.
09/286,119Applicant(s)
Goffi et al.Examiner
Jerry A. LorengoGroup Art Unit
1734☐ Responsive to communication(s) filed on _____.☐ This action is **FINAL**.☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three (3) month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims☒ Claim(s) 1-5 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.☒ Claim(s) 1-5 is/are rejected.☐ Claim(s) _____ is/are objected to.☐ Claims _____ are subject to restriction or election requirement.**Application Papers**☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.☐ The drawing(s) filed on _____ is/are objected to by the Examiner.☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.☒ The specification is objected to by the Examiner.☐ The oath or declaration is objected to by the Examiner.**Priority under 35 U.S.C. § 119**☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been☒ received.☐ received in Application No. (Series Code/Serial Number) _____.☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).**Attachment(s)**☒ Notice of References Cited, PTO-892☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____☐ Interview Summary, PTO-413☐ Notice of Draftsperson's Patent Drawing Review, PTO-948☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

(1)

Specification

The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-References to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
- (e) Background of the Invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).
- (h) Detailed Description of the Invention.
- (i) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing (see 37 CFR 1.821-1.825).

While the instant specification adequately discloses the subject matter of the applicants' invention, it has framed in a non-typical manner. The above arrangement should be followed as it allows for easy understanding, quick understanding, and aesthetic form.

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(2)

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 4, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 1 recites the limitation "the raw artefact" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "exhausted supporting base" in line 36. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 utilizes the term "and/or" in lines 11 and 35. The use of this term renders the claim indefinite because it is not understood whether the term is to be interpreted as conjunctive or alternative.

Claims 1 and 5 disclose that the artifact may be submitted to "possible" operations of surface preparation and "possibly" to preliminary painting cycles. The use of the terms "possible" or "possibly" render the claims indefinite because it is not understood by the examiner whether or not the artifact is to be pre-treated and painted or not. It appears that the applicant is attempting to disclose optional operative steps and if so should utilize the term "optionally".

Regarding claim 3, the phrase "i.e." renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 2 is likewise rejected due to its dependence upon base claim 1

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(3)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

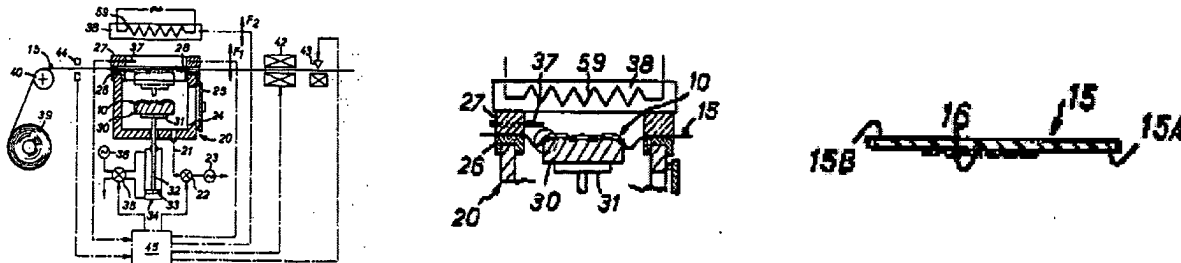
A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,314,814 to Deroode.

Regarding applicant claims 1 and 5, Deroode discloses a method and apparatus for the thermal sublimation transfer decoration of three-dimensional substrates comprising the steps of: (1) Providing a substrate 10 to be decorated onto a work bench means 30,31,32 (column 6, lines 8-34); (2) providing a sublimable color transfer support (a sheet as per applicant claim 4) comprising a flexible and thermally deformable polymeric support skin 15 on which is carried a sublimable color pattern 16 (column 4, lines 31-65; column 5, lines 51-59); (3) contacting the sublimable color transfer support 15,16 against the substrate 10 held on work bench means 30,31,32 within a vacuum chest means (a special hood) 20 and creating a vacuum between the substrate 10 and the sublimable color transfer support 15,16 by way of vacuum chest means 20 (as per applicant claim 4) thereby forcing sublimable color transfer support 15,16 into intimate contact with the substrate 10 (column 5, lines 56-66; column 6, lines 3-37); (4) heating the sublimable color transfer support 15,16 and substrate 10 while under intimate vacuum contact by way of heating means 38 located above the work bench means 30,31,32 thereby causing said sublimable pattern to sublime, penetrate, and thereby decorate substrate 10 at a temperature of about 200°C for a period of about 30 seconds (column 4, lines 15-16; column 7, lines 4-36; column 7, line 40); and (5) after transfer and ceasing of the heat application, separating the decorated substrate 10 from the spent sublimable color transfer support 15,16 (column 7, lines 45-48). The apparatus and materials of Deroode are illustrated below:

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(4)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (3), above, in view of U.S. Patent No. 4,411,667 to Meredith et al.

The applicant should note that the rejection of claims 1, 4, and 5 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,314,814 to Deroode did not give any patentable weight to the "possible" steps of surface pre-treatment and painting as set forth in claims 1 and 5. This is because it is understood by the examiner that these steps are optional and would not necessarily be required in practicing the method as disclosed. However, in the interest of compact prosecution, these other "possible" steps will be treated on the merits hereunder.

Although Deroode, in section (3), above, discloses a method and apparatus for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per the "possible" steps of applicant claims 1 and 5, that the substrate to be

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decorated is preliminarily surface treated (cleaned, de-greased, etc.) or painted before it is advanced to the step of sublimation transfer.

However, the transfer sublimation printing of coated and cured metal substrates is known, as disclosed by Meredith et al. In his method, Meredith et al. teaches a method of continuous transfer printing wherein a continuous length of metal strip is coated with a thermosetting material e.g. an alkyd, polyester, polyurethane, or epoxy paint, and brought into contact after curing with a continuous strip of printed sublimation material (abstract). He also discloses that the paint may in turn be surfaced with a thermosetting lacquer, i.e., a transparent paint (column 1, lines 21-22).

Therefore, in the case of metal object to be decorated, for example, and especially by way of sublimation printing, it would have been obvious to one of ordinary skill in the art to pretreat a metal substrate by painting as well as by transparent protective over coating, prior to transfer decoration, as taught by Meredith et al. motivated by the fact that it is well known in the art that sublimation transfer printing requires a substrate which presents a surface into which the sublimation print may diffuse. This is especially true with respect to metal, glass, and ceramic substrates.

Furthermore, it would have also been obvious to one of ordinary skill in the art to pre-treat the surface of the substrate (such as by cleaning, de-greasing, abrading, oxidative coating, etc.) prior to the application of any paints or lacquers motivated by the fact that the skilled artisan would have appreciated the importance of supplying a substrate with a surface amenable to painting or coating, i.e., a surface free from dirt, grime, grease, or other surface defects which would decrease the effectiveness of coating or paints applied thereto.

(5)

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode or, in the alternative, over the references as combined in section (4), above.

Although Deroode, as set forth in sections (3) and (4), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure, he does not specifically disclose, as per applicant claim 3, that the artifact is vacuum wrapped and heated in a

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preliminary step prior to transfer in order to achieve thermoforming of the sublimable color transfer support against the substrate to be decorated.

Deroode, however, does disclose that the sublimable color transfer support is preheated prior to its vacuum placement against the substrate followed by intimate contact by the application of vacuum pressure followed by continued heating in order to bring about complete sublimation transfer of the decoration from the sublimable color transfer support to the substrate (column 7, lines 1-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to supply a separate and preliminary heating and vacuum wrapping step prior to the actual heat and vacuum transfer motivated by the fact that the preliminary heating of the sublimable color transfer support would render it more flexible (as it is a thermoplastic) thus ensuring intimate contact between it and the substrate to be decorated and thereby increase the effectiveness of the sublimation transfer itself.

(6)

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,314,814 to Deroode, as set forth in section (3), above, or, in the alternative, over the references as combined in section (4), above, in further view of U.S. Patent No. 4,923,847 to Ito et al.

Deroode, as set forth in sections (3) and (4), above, discloses a method for the sublimation transfer decoration of a substrate by way of a heat and vacuum pressure. Although he discloses that the support film 15 making up the sublimable color transfer support may be comprised of materials such as polypropylene, polyester, silicone, and polycarbonic materials such as PTFE (column 4, lines 18-20), he does not specifically disclose, as per applicant claim 2, that the support material 15 is composed of polyvinyl alcohol.

Ito et al., however, also drawn to thermal sublimation transfer methods, discloses a sublimable color transfer support which comprises support or base film 1 on which is carried a sublimable transfer dye. Ito et al. discloses that the base film 1 may comprise papers or films such as condenser paper, aramide film, polyester film, polystyrene film, polysulfone film, polyimide film, *polyvinyl*

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alcohol film (emphasis added), and cellulose films (column 4, lines 65-68; column 5, line 1; Figure 1).

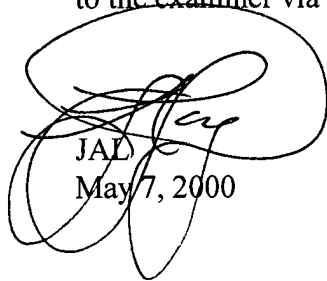
Therefore, it would have been obvious to one of ordinary skill in the art to utilize a polyvinyl alcohol film, as taught by Ito et al. in place of the films (polyester, etc.) disclosed by Deroode motivated by the fact that Ito et al. discloses that polyvinyl alcohol films are known for use as supports for sublimation transfer films and furthermore by the fact that Deroode discloses that it is self-evident that other materials besides those disclosed by him may be used (column 4, lines 21-23).

(7)

References D and N-P on PTO Form-892 have been cited by the examiner as having particular relevance to the subject matter at hand.

(8)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patent Examiner Jerry Lorengo whose telephone number is (703) 306-9172. The applicant should note that official communications regarding the instant application may be forwarded directly to the examiner via facsimile at (703) 305-7115.


JAL
May 7, 2000



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700